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UNIVERSITY OF CALIFORNIA
BERKELEY, CALIFORNIA

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UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

Project

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TITLE

FOREST INSECT SURVEY - SEASON OF 1942

GENERAL GRANT NATIONAL PARK

CALIFORNIA

by

John E. Patterson and George R. Struble
Berkeley, California
February 26, 1943

SUBJECT-

INDEX NO.-

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FOREST INSECT SURVEY - SEASON OF 1942
GENERAL GRANT NATIONAL PARK
CALIFORNIA

APPROVED BY:

F. P. Keen
Senior Entomologist, in Charge

SUBMITTED BY:

John E. Patterson
Entomologist
George R. Stubble
Associate Entomologist

FOREST INSECT SURVEY - SEASON OF 1942
GENERAL GRANT NATIONAL PARK, CALIFORNIA

A forest insect survey was made in the General Grant National Park on October 17, 1942, by John E. Patterson and George R. Struble of the Bureau of Entomology and Plant Quarantine. This survey consisted of making a general reconnaissance of the Park timber stands and an aerial spotting of infested trees made from the fire lookout tower located near the southeast corner of the park. In addition a roadside strip was run longitudinally through the Park along the Generals Highway.

The estimates of insect damage which follow are based upon the counts and measurements secured in the reconnaissances and on the roadside strip survey.

RESULTS

Character and Extent of the Infestation.

The virgin pine stands of the park are composed of sugar pine, ponderosa pine, and Jeffrey pine. Each of these species are generally attacked by a different species of pine bark beetle. The sugar pine infestations resulted from attacks made by the mountain pine beetle, Dendroctonus monticolae Hopk., those in ponderosa pine from attacks by the western pine beetle, Dendroctonus brevicomis Lec., while the Jeffrey pine infestations resulted from attacks by the Jeffrey pine beetle, Dendroctonus jeffreyi Hopk.

Losses in all species during the year were very low indicating endemic beetle infestations. A count of all red-topped trees made from the fire lookout indicated a slight decline in the number of infested trees from the previous year. The most active infestation appeared to be in the vicinity of headquarters and in sugar pine. Infestation conditions in ponderosa pine and Jeffrey pine were decidedly endemic during the year.

Early in the season a top-killing outbreak of the engraver beetle, Ips confusus (Lec.) developed in sugar pine and ponderosa pine on the ridges surrounding Sequoia Lake. This infestation extended into the western limits of the park where a number of trees of both species were damaged. The outbreak died out before the end of the season without being accompanied by Dendroctonus beetle attacks which usually follow this type of top killing.

Estimated Insect Loss in 1942.

The estimated insect-caused losses during the year 1942 are given in the following summary:

Loss in sugar pine	12 trees
Loss in ponderosa pine	7 trees
Loss in Jeffrey pine	3 trees
Top-kill damage	38 trees affected

These infestations occurred in individual trees widely scattered throughout the Park. No evidence of grouping of attacks was in evidence.

Control Recommendations.

Insect conditions found this year do not appear sufficient to warrant any special control action other than the disposal of infested trees for wood fuel. Continuation of the former practice of removing infested trees concurrently with the development of beetle broods in them is highly recommended, and should be adequate in dealing with the present endemic infestation.

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